Preliminary Delineation of Wetlands and Other Waters of the United States

San Francisquito Creek Flood Protection Project, East Bayshore Road to San Francisco Bay

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Acronyms and Abbreviations

Arid West Supplement	Corps of Engineers Wetland Delineation Manual: Arid West Region
Creek	San Francisquito Creek
CWA	Clean Water Act
DM	Diked Marsh
FP	Freshwater Pond
FWM	Freshwater Marsh
GPS	global positioning system
HTL	high tide line
HTL	high tide line
MHW	mean high water
MSL	mean sea level
NAVD	North American Vertical Datum
other waters	other waters of the United States
Project	San Francisquito Creek Flood Protection Project, East Bayshore Road to San Francisco Bay
RPW	relatively permanent water
TC	Tidal Channel and Bay Waters
TNW	Traditional Navigable Water
TP	Tidal Pan
TSM	Tidal Salt Marsh
US 101	U.S. Highway 101
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
WETS	Wetland Evaluation Technique Summary

San Francisquito Creek Flood Protection Project Preliminary Delineation of Wetlands and Other Waters of the United States

1 Summary

This report presents the results of a delineation of wetlands and other water bodies conducted for the San Francisquito Creek Flood Protection Project, East Bayshore Road to San Francisco Bay in San Mateo and Santa Clara Counties, California. The delineation was conducted to assist the San Francisquito Creek Joint Powers Authority in determining the type and extent of wetlands and other waters of the United States (other waters) in the delineation study area that may be subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act.

Wetlands and other waters of the United States were delineated using the routine onsite determination method described in the USACE *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and, where applicable, the criteria specified in the Regional Supplement to the *Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Supplement) (U.S. Army Corps of Engineers 2008). Data were gathered during field surveys conducted on July 6, 7, and 8, 2010 and February 22, 2012. Identification of the extent of tidal waters under Rivers and Harbors Act Section 10 jurisdiction was based on field evidence of the mean high water (MHW) mark.

The study area for the delineation encompasses 263.5 acres and includes all areas that could potentially be directly or indirectly disturbed during implementation of the Project (Figure 1).

Based on the data gathered during the field surveys, the delineation study area preliminarily contains 140.8 acres of wetlands and other waters of the United States. Jurisdictional area types in the study area are tidal salt marsh, diked marsh, freshwater marsh, tidal channel and bay waters, freshwater pond, and tidal pan. The combined acreage of the wetlands and other waters is shown in Table 1.

Table 1. Acreage Summary of Wetlands and Other Waters

Feature	Acreage
Tidal Salt Marsh (TSM)	112.3
Diked Marsh (DM)	4.8
Freshwater Marsh (FWM)	0.3
Tidal Channel and Bay Waters (TC)	22.4
Freshwater Pond (FP)	0.1
Tidal Pan (TP)	0.4
Total	140.81

A description of the wetlands and other waters mapped in the delineation study area is provided in the *Results* section of this report, and their locations are shown on Exhibit A. All jurisdictional area boundaries presented in this report are preliminary and subject to verification by the USACE San Francisco District.

2 Introduction

This report presents the results of the ICF International's delineation of wetlands and other water bodies for the proposed San Francisquito Creek Flood Protection Project, East Bayshore Road to San Francisco Bay (Project) in San Mateo and Santa Clara counties, California (Figure 1). The Project is proposed to provide improved flood protection for homes, businesses, and other facilities along San Francisquito Creek (Creek) in the cities of Palo Alto and East Palo Alto downstream of U.S. Highway 101 (US 101). The Project is expected to consist of a combination of levee improvements, floodwalls, possible development of expanded floodplain storage on the adjacent Palo Alto Municipal Golf Course, and possible restoration of the hydraulic connectivity between the Creek and the adjacent Faber Tract Baylands (Faber Tract), restoring their historic role as tidally influenced floodplain, as discussed in the City of Palo Alto's Baylands Master Plan (2008).

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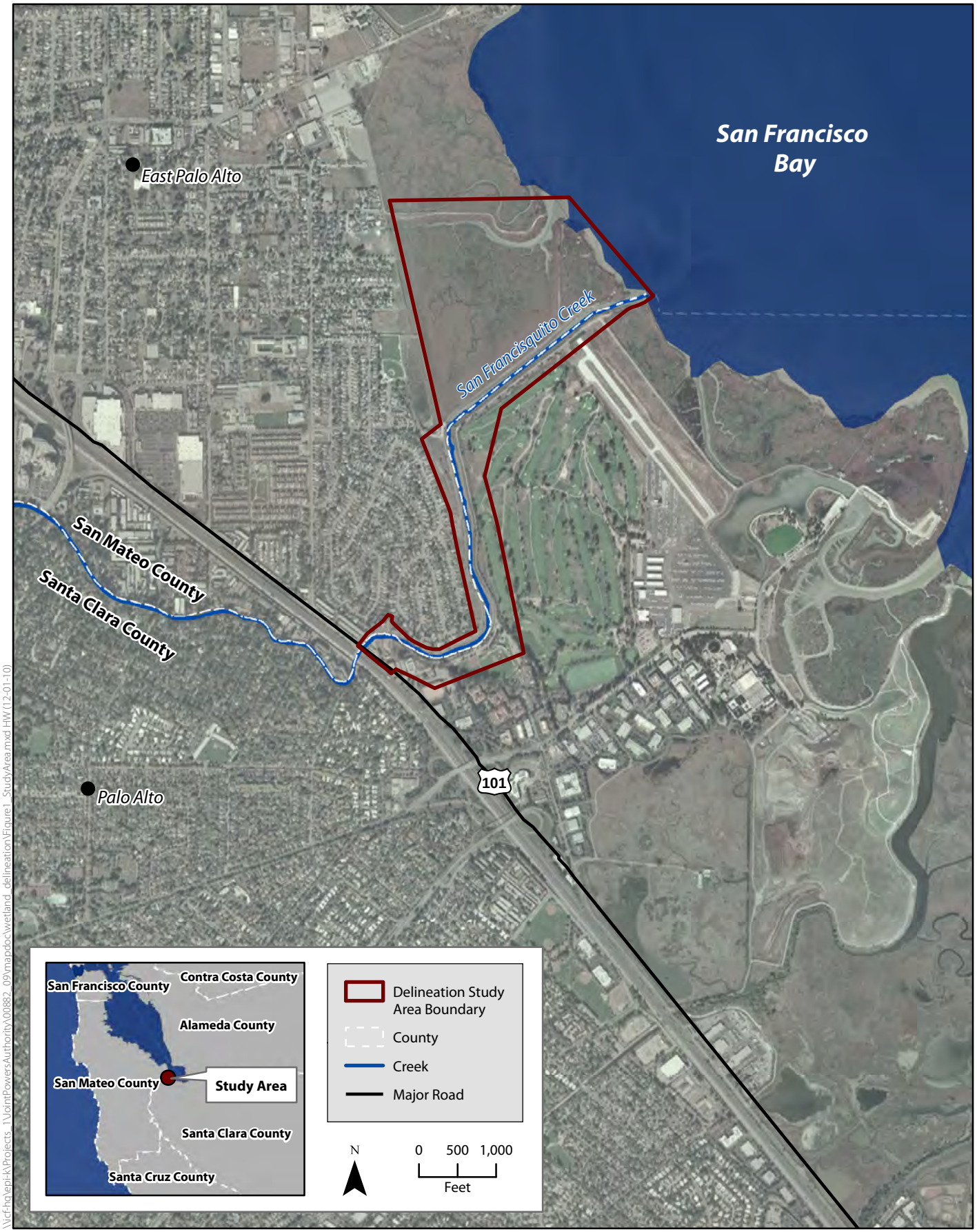
2.1 Site Location and Driving Directions

The delineation study area is located in southeastern San Mateo County and northeastern Santa Clara County, on the border between East Palo Alto and Palo Alto. Figure 1 shows the location of the delineation study area and its relationship to the surrounding towns and highways.

The delineation study area is shown on the Palo Alto and Mountain View U.S. Geological Survey (USGS) 7.5-minute quadrangles. The approximate centroid of the delineation study area is located at 37.46132° north latitude and 122.12379° west longitude.

To reach the delineation study area, take US 101 south from San Francisco. Take the University Avenue exit in Palo Alto and turn right onto University Avenue. Proceed approximately 0.2 mile and turn right on Donohoe Street. Proceed approximately 0.25 mile and turn right onto Clarke Avenue. Proceed approximately 0.1 mile and turn left onto O'Connor Street. Proceed approximately 0.3 mile to park at the end of O'Connor Street. Walk a short distance along the footpath to reach the delineation study area.



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ICF INTERNATIONAL

Figure 1
Study Area

2.2 Site Description

2.2.1 General

The 263.5-acre delineation study area is situated in alluvial plain, alluvial fan, and tidal marsh area. Palo Alto Municipal Golf Course and the Palo Alto Airport are adjacent to the eastern and southern boundaries of the study area. San Francisco Bay is to the east, and residential areas and tidal marshes are to the north. The western edge is formed by East Bayshore Road.

A wetland delineation of the entire golf course was prepared in 1994 (H.T. Harvey and Associates 1994); the delineation map was verified by the USACE San Francisco District on April 28, 1995 (file number 21160S49). The delineation report indicates that 2.51 acres of Section 404 jurisdictional wetlands and 17.3 acres "historic waters" exist in the golf course study area. The historic waters were features that were identified by H.T. Harvey & Associates using historic maps (prepared before the golf course was constructed) and consisted of sloughs, channels, and ponds. (These features, which no longer exist on the site, were assumed to meet the definition Rivers and Harbors Act Section 10 jurisdiction. They appear to be shown on the H.T. Harvey & Associates delineation map but are not labeled as such.) Because H.T. Harvey's delineation map was verified more than five years ago, it is no longer valid and needs to be updated using the Arid West Supplement.

Artificial levees exist along both sides of San Francisquito Creek and along the western edge and interior of the Faber Tract (discussed below). A footbridge (Friendship Bridge) crosses the Creek channel just south of the Faber Tract.

Elevations in the delineation study area are roughly 15 feet above mean sea level (MSL) (referenced to the North American Vertical Datum [NAVD]) near East Bayshore Road to approximately sea level in the eastern part. With the exception of levees, slopes are nearly level in most areas and undulating in the golf course. Levee slopes are approximately 1:1 to 2:1 (horizontal:vertical). The banks of San Francisquito Creek are roughly four feet high and in places are vertical. Natural levees exist on the "benches" along the Creek in places, causing the ground to slope away from the channel in these areas.

In the northern part of the area are the approximately 87-acre Faber Tract and the southern portion of the Laumeister Tract, the latter of which consists of a natural marsh. The Faber Tract appears to have been diked in the 1930s and used for pasture and for hay production (H.T. Harvey & Associates 2009). The dike probably eroded sometime between 1961 and 1963, allowing some tidal exchange into the area. Dredge spoils from the Palo Alto Harbor subsequently were deposited on the tract between 1968 and 1969. San Mateo County initially established a hydrologic connection between the Faber Tract and the adjacent tidal marsh to the north (in the Laumeister Tract) via three culverts installed through the levee separating the two areas. In 1971, the county breached the outboard levee in the northeastern corner of the Faber Tract, opening the tract to tidal action to San Francisco Bay.

2.2.2 Hydrology

The delineation study area is located in the San Francisco Bay hydrologic unit (HUC 18050004) (U.S. Geological Survey 2007).

San Francisquito Creek, shown as a perennial stream on the USGS topographic quadrangle map, flows overall easterly through the entire delineation study area (Exhibit A). The Creek empties into South San Francisco Bay at the eastern edge of the delineation study area. Based on a review of historic aerial photographs and U.S. Coast Survey maps (Hermstad et al. 2009), much of the plan form of the Creek and extent of its associated tidal marshes have significantly changed since the mid-1800s. An 1899 USGS topographic map shows the Creek channel extending through what is now the Palo Alto Municipal Golf Course. A September 1948 aerial photograph available on Google Earth shows the area of what is now the golf course as occupied by an airfield with two dirt or grass runways.

San Francisquito Creek is tidally influenced throughout the delineation study area. At San Francisquito Creek's confluence with San Francisco Bay, the MHW elevation is 6.544 feet NAVD 1988 (converted from NGVD 1929) (H.T. Harvey & Associates 1994). The high tide line (HTL) at the Port of Redwood City (i.e., the nearest known record for HTL) is 7.034 feet NAVD 1988 (converted from NGVD 1929) (Wetlands Research Associates 2007). Because the tidally influenced areas of the study area are bounded by levees, in plan view the datums effectively coincide near the landside toe of the levees when viewed at the scale that was used for the delineation map (see Exhibit A). Because of map data limitations, the MHW and HTL elevations are both represented by the nearest whole-foot contour (i.e., 7.0 feet NAVD 1988) on the exhibit.

Wetlands that are not hydrologically connected to San Francisquito Creek (i.e., those isolated by levees or dikes) are not influenced by tidal action (FP1, FP2, and DM1 to DM13). The City of East Palo Alto maintains two stormwater outfall facilities to San Francisquito Creek near the east end of O'Connor Street and San Francisquito Creek, and immediately north of East Bayshore Road at the upstream end of a side channel to San Francisquito Creek. The East Bayshore Road outfall drains to an apparent artificial channel, which extends a short distance to San Francisquito Creek.

2.2.3 Soils

The U.S. Department of Agriculture (USDA) Soil Conservation Service (Kashiwagi and Hokholt 1991) (San Mateo County) and the USDA Natural Resources Conservation Service (2010a) (Santa Clara County) have mapped the soils within the delineation study area. Salient characteristics of the soil map units are summarized in Table 2. Among these, the only soil map unit that consists entirely of native soil material is Novato clay. (The soil survey apparently did not recognize the fact that dredged material was placed in the Faber Tract, which the soil survey indicates is Novato clay.) All of the other map units consist partly or wholly of various thicknesses of fill material that has been placed on top of the native soil.

Table 2. Summary of Characteristics of the Soils in the Delineation Study Area

Soil Map Symbol	Soil Map Unit Name	Landform	Natural Drainage Class	Hydric Status of Primary Component and Inclusions of Map Unit*
108	Botella-Urban land complex, 0 to 5 percent slopes	Stream terraces, alluvial fans	Well	Primary component: non-hydric Inclusions: non-hydric
120/120scl	Aquic Xerorthents, bay mud substratum, 0 to 2 percent slopes	Marshes	Poor	Primary component: hydric Inclusions: hydric
131	Urban land	(not identified)	(not identified)	Primary component: non-hydric Inclusions: non-hydric
155/155scl	Novato clay, 0 to 1 percent slopes, tidally flooded	Salt marshes	Very poor	Primary component: hydric Inclusions: non-hydric
169	Urbanland-Elder complex, 0 to 2 percent slopes, protected	Alluvial fans and streams	Somewhat excessive	Primary component: non-hydric Inclusions: non-hydric
169scl	Urbanland-Campbell complex, 0 to 2 percent slopes, protected	Alluvial fans and streams	Somewhat excessive	Primary component: non-hydric Inclusions: non-hydric

Source: Kashiwagi and Hokholt 1991; USDA Natural Resources Conservation Service 2010a; Soil Survey Staff 2011

* "Primary Component" refers to the soil that makes up approximately 85 percent or more of the map unit. The remaining soils in the map unit are inclusions.

A map of the soils in the delineation study area and associated hydric soil information are provided in Appendix A.

2.2.4 Precipitation and Growing Season

The climate in the delineation study area is characterized by warm, dry summers and cool, moist winters. National Weather Service cooperative weather station number CA 7339 (Redwood City) is the closest weather station to the delineation study area, located approximately 4.5 miles to the northwest. Average annual precipitation at this weather station is 19.8 inches, with most falling as rain from October to April (U.S. Department of Agriculture Natural Resources Conservation Service 2010b). (See Wetland Evaluation Technique Summary [WETS] tables in Appendix B.)

Rainfall for the precipitation year preceding the delineation field surveys conducted in early July, 2010 (i.e., precipitation year July 1, 2009–June 30, 2010) was roughly 110 percent of the average in the vicinity. Rainfall for the precipitation year for the delineation field survey conducted in late-February 2012 (i.e., precipitation year July 1, 2011–June 30, 2012) as of the date of the survey was roughly 35 percent of the average in the vicinity.

The length of the growing season at the Redwood City weather station in 5 years out of 10 at 28 degrees air temperature averages 365 days (U.S. Department of Agriculture Natural Resources Conservation Service 2010b).

2.2.5 Vegetation

The delineation study area is within the San Francisco Bay Area subregion of the Central Western California region in the California Floristic Province (Hickman 1993).

In addition to the aquatic habitats described in the *Results* section below, the delineation study area also supports annual grasslands, ruderal areas, turf, and urbanized areas. Scientific names of the plant species that were observed while conducting the delineation field surveys and their wetland indicator status are provided in Appendix C. The wetland plant communities found in the delineation study area are described in the *Results* section of this report.

3 Delineation Methods

Fieldwork for the delineation was conducted by a soil and wetland scientist and a botanist on July 6, 7, and 8, 2010 and on February 22, 2012, using the routine onsite determination method described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and, where applicable, criteria specified in the Regional Supplement to the *Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Supplement) (U.S. Army Corps of Engineers 2008).

As detailed in the Arid West Supplement, data on vegetation, soil, and hydrology characteristics used as the basis for wetland boundary determinations were collected and recorded on Arid West Supplement data forms (Appendix D). Data forms were completed at 49 sample plots (data points).

The wetland indicator status of each plant species was based on the *National List of Plant Species that Occur in Wetlands: California* (Reed 1988). Common and scientific plant names were taken from *The Jepson Manual: Vascular Plants of California,* Second Edition (Baldwin et al. 2012).

The inland limit of USACE jurisdiction for tidally influenced waters was mapped at the high tide line (HTL) in the absence of adjacent wetlands. USACE jurisdiction of nontidal waters was mapped at the MHW mark. The MHW mark represents the limit of potential USACE jurisdiction over tidal waters under Section 10 of the Rivers and Harbors Act, whereas the HTL represents the inland limit of USACE jurisdiction in the absence of adjacent nontidal wetlands under Section 404 of the Clean Water Act.

For practical purposes, the HTL mark was identified using the landward extent of hydrophytic vegetation, according to USACE guidance in Section 33 of the U.S. Code of Federal Regulations, Part 328.3 (2010). The hydrophytic vegetation was predominantly composed of pickleweed (*Salicornia pacifica*). Pickleweed typically occurs to the landward limit of wetlands in the tidally influenced areas of the study area because such areas are bordered by a steep levee slope, thereby severely limiting the occurrence of "high" marsh species, such as alkali heath (*Frankenia salina*) and saltgrass (*Distichlis spicata*), which would occupy the landward limits of wetlands in areas unconstrained by levees.

A Trimble GeoXT global positioning system (GPS) receiver, typically accurate to less than 1 meter horizontally, was used to record the location of the data points and certain jurisdictional area

boundaries. However, where physical access to the boundary was poor, the features were mapped directly onto a recent 1 inch=160 foot color aerial photograph (taken in 2008) base map (ESRI 2008). The division between wetlands and other waters was also mapped from aerial photograph interpretation. Features depicted in the aerial photograph were digitized into a geographic information system data layer. This mapping was added to the GPS data layer to generate the delineation map at a scale of 1 inch=100 feet.

The resulting delineation map and this report were prepared in accordance with USACE San Francisco District guidelines (U.S. Army Corps of Engineers 2007).

4 Results

Table 3 provides the total acreage of wetlands and other waters mapped in the delineation study area.

Table 3. Acreage Summary of Wetlands and Other Waters

Feature	Type	Acreage
Tidal salt marsh (TSM)	Wetland	112.3
Diked Marsh (DM)	Wetland	4.3
Freshwater Marsh (FWM)	Wetland	0.3
Wetlands Subtotal		116.9
Tidal Channel and Bay Waters (TC)	Other Waters	22.4
Tidal Pan (TP)	Other Waters	0.4
Freshwater Pond (FP)	Other Waters	1.1
Other Waters Subtotal		23.9
Total		140.81

Photographs of representative wetlands and other waters and of the delineation study area in general are provided in Appendix E.

4.1 Wetlands

4.1.1 Tidal Salt Marsh

Tidal salt marshes were mapped throughout the Faber Tract and Laumeister Tract, and along both sides of San Francisquito Creek. The marshes are supported primarily by tidal exchange.

The tidal salt marsh community (represented by data points 1, 3, 5, 15, 17, 19, 21, 29, 31,37, and 39) met the hydrophytic vegetation criterion based on a dominance of Pacific cordgrass (*Spartina foliosa*) (OBL) (at approximately MHW and below), pickleweed (OBL) (both at approximately MHW to MHHW); and perennial peppergrass (*Lepidium latifolium*) (FACW), gumplant (*Grindelia stricta*) (FACW), and alkali heath (*Frankenia salina*) (FACW) (all at approximately MHHW). Wetland hydrology was documented either by sediment deposits (B2), saturation (A3), or drift deposits (B3). Hydric soil was documented either by a redox dark surface (F6), stratified layers (A5), Histic epipedon (A2), or depleted matrix (F3).

Included within the mapped areas of tidal salt marsh are tidal channels that were too narrow to map at the scale used. Also included are narrow bands of brackish tidal marsh along a few-hundred-foot-long section of San Francisquito Creek downstream of East Bayshore Road. In the brackish marsh, bulrush (*Schoenoplectus* sp.) is the dominant species rather than cordgrass and pickleweed.

4.1.2 Diked Marsh

Diked marshes were mapped in areas on the landward side of the levees along San Francisquito Creek and within the golf course. Such areas appear to have to have been tidal salt marsh before levees were constructed in the area and appear to not have received significant amounts of fill material as part of levee and golf course construction.

The diked marsh community (represented by data points 7, 9, 11, 13, 24, 25, 27, 33, 35, 41, 45, and 48) met the hydrophytic vegetation criterion based on a dominance of saltgrass (FACW), pickleweed, alkali heath, Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and other hydrophytes. (Percent vegetative cover is low is some areas, but overall greater than the 5 percent cover threshold required for wetlands [U.S. Army Corps of Engineers 2008]). Wetland hydrology was documented either by a salt crust (B11), surface soil cracks (B6), or oxidized rhizospheres (C3). Hydric soil was documented either by a depleted matrix (F3) or redox dark surface (F6).

The marshes generally appear to be supported primarily by incident precipitation. However, the diked marshes that occur within or adjoining the golf course may receive inputs from the turf sprinkler systems, both indirectly and as runoff.

4.1.3 Freshwater Marsh

The freshwater marsh community was mapped at only one location, along the shore of a pond within the Palo Alto Municipal Golf Course.

Freshwater marsh is represented by data point 44 and is dominated by cattail (*Typha* sp.) and hardstem bulrush (*Schoenoplectus acutus*) (both obligate wetland species). The marsh met the hydrophytic vegetation criterion based on dominance by cattail. Wetland hydrology was documented by the presence of surface water. Hydric soil was documented by redox dark surface (F6).

The freshwater marsh appears to be supported by water piped into the associated freshwater pond (discussed under *Freshwater Pond, Section 4.3.2* below), and to a lesser degree ground water.

4.2 Other Waters

Aquatic areas mapped as other waters were less than five percent vegetated, and therefore qualify as *other waters* (U.S. Army Corps of Engineers 2008).

4.2.1 Tidal Channel and Bay Waters

Tidal channels exist as San Francisquito Creek and sloughs that extend into the Faber Tract and Laumeister Tract. Bay waters exist as the deep water area of South San Francisco Bay. All the channels are supported by tidal action.

4.2.2 Freshwater Pond

The freshwater pond community was mapped at only one location, on the Palo Alto Municipal Golf Course. The pond appears to be supported by water piped into it for the golf course and to a lesser degree by ground water.

The 1948 aerial photograph mentioned under *Hydrology, Section 2.3.2* above shows that a pond existed in the general footprint of the present-day pond.

4.2.3 Tidal Pan

Three tidal pans were mapped within the Faber Tract. The pans appear to exist at approximately MHHW and appear to be primarily supported by extreme high tides.

5 Jurisdictional Determination Information

In accordance with USACE San Francisco District (2007) delineation report guidelines, this section provides information intended to assist the USACE in completing the Approved Jurisdictional Determination Form, in particular Section III, Parts A and B.

5.2.1 Relatively Permanent Waters

Because San Francisquito Creek appears to be intermittent or perennial and because it is subject to tidal action, it qualifies as a *relatively permanent water* (RPW) (Exhibit A).

All of the sloughs that extend into the Faber Tract and Laumeister Tract also appear to be RPWs because they are subject to the ebb and flow of the tide.

5.2.2 Traditional Navigable Waters

South Francisco Bay (along the northeastern edge of the delineation study area) is a *Traditional Navigable Water* (TNW) (Exhibit A), as defined under 33 CFR Section 329.4 and 33 CFR Section 328.3(a)(1).

5.2.3 Evaluation of Hydrologic and Water Quality Characteristics of Stream Order Segment

San Francisquito Creek has a watershed of approximately 45 square miles. The headwaters of the Creek are relatively undeveloped. The lower part of its watershed is heavily urbanized. The main stem of the Creek is 14 miles long (City of Palo Alto Parks and Recreation Commission 2010).

During the wetland delineation field surveys in early July 2010, a small base flow in the Creek was observed at low tide. It is unknown whether the base flow normally continues through to the beginning of the following rainy season.

San Francisquito Creek is listed as impaired for sedimentation/siltation on the State Water Resources Control Board (2006) Clean Water Act Section 303(d) List of Impaired Waterways.

5.2.4 Evaluation of Hydrologic, Water Quality, and Functional Characteristics of Onsite Wetlands

There are no known data on the hydrologic or water quality characteristics of the wetlands in the delineation study area. However, the tidal salt marshes that adjoin the San Francisquito Creek channel are expected to receive typical wildland and urban runoff pollutants, including sediment, nutrients, pesticides, and litter. The diked marshes that exist within and adjacent to the golf course and the freshwater marsh are assumed to receive runoff containing nutrients and pesticides from the golf course.

6 References Cited

Baldwin, B., D. Goldman, D. Keil, R. Patterson, T. Rosatti, and D. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California,* Second Edition. University of California Press, Berkeley, CA.

City of Palo Alto Parks and Recreation Commission. 2010. San Francisquito Creek, Bay to 101 Capital Project. June 22.

City of Palo Alto. 2008. *Baylands Master Plan*. 4th edition. Available at: http://www.cityofpaloalto.org/civica/filebank/blobdload.asp?BlobID=14882. Accessed on: December 17, 2010.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual.* (Technical Report Y-87-1.) Vicksburg, MS: U.S. Army Waterways Experiment Station.

ESRI. 2008. Aerial Photograph—I3 Imagery Prime World 2D. Redlands, CA.

H.T. Harvey & Associates. 1994. *Palo Alto Golf Course Santa Clara County, California Identification of Waters of the U.S. and Biotic Assessment*. (Project #805-01). May. Prepared for Amphion Environmental, Inc., Oakland, CA. Alviso, CA.

H.T. Harvey & Associates. 2009. *San Francisco Creek Flood Protection Analysis Project—Biotic Constraints and Opportunities Assessment* (Project #3029-01). May 29, 2009 letter to Christie Beeman, P.E., Philip Williams & Associates, San Francisco, CA. Los Gatos, CA.

Hermstad, D., K. Cayce, and R. Grossinger. 2009. *Historical ecology of lower San Francisquito Creek, Phase 1*. Technical memorandum and accompanying project GIS data. Contribution No. 579. Historical Ecology Program, San Francisco Estuary Institute, Oakland, CA.

Hickman, J. C. 1993. *The Jepson Manual of Higher Plants of California.* Berkeley and Los Angeles: University of California Press.

Kashiwagi, J.H. and Hokholt, L.A. 1991. Soil Survey of San Mateo County, eastern part, and San Francisco County, California. U.S. Department of Agriculture, Soil Conservation Service in cooperation with University of California Agricultural Experiment Station. Washington, DC: U.S. Government Printing Office.

Reed, P.B. 1988. *National List of Plant Species that Occur in Wetlands: California (Region 0).* (Biological Report 88 [26.10].) May. Washington, DC: U.S. Fish and Wildlife Service, Research and Development. Prepared for National Wetlands Inventory.

Soil Survey Staff. 2011. Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/ Accessed February 23, 2012.

State Water Resources Control Board. 2006. Clean Water Act Section 303(d) List of Impaired Waterways. Available:http://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_app_1_303d.pdf. Accessed: August 2, 2010.

U.S. Army Corps of Engineers, San Francisco District. 2007. Information requested for verification of Corps jurisdiction. November. San Francisco, CA.

U.S. Army Corps of Engineers, San Francisco District. 2008. *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0)*. J. S. Wakeley, R. W. Lichvar, and C.V. Noble (eds.). (ERDC/EL TR-08-28.) Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Code of Federal Regulations. 2010. *Section 33 of the Code of Federal Regulations, Part 328.3*. Available at: http://www.mvn.usace.army.mil/ops/regulatory/reg_wetland_waters.asp. Accessed on: December 17, 2010.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2010a. Soil survey of Santa Clara area, California, western part. In cooperation with University of California Agricultural Experiment Station. Washington, DC: U.S. Government Printing Office.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2010b. WETS Table documentation for the Redwood City cooperative weather station (station CA 7339), California. Available: http://www.wcc.nrcs.usda.gov/ftpref/support/climate/wetlands/ca/06061.txt. Accessed: June 22, 2010. Created: August 29, 2002. U.S. Geological Survey. 2007. Boundary Descriptions and Names of Regions, Subregions, Accounting Units and Cataloging Units. Last revised: April 2, 2007. Available: http://water.usgs.gov/lookup/getwatershed?18050004/www/cgi-bin/lookup/getwatershed. Accessed: July 2, 2010.

Wetlands Research Associates. 2007. Biological Resources Assessment Redwood City Ferry Terminal Port of Redwood City, San Mateo County, California. Prepared for CHS Consulting Group, San Francisco, CA. San Rafael, CA.

Appendix A

Hydric Soil Information and Soils Map

Map Scale: 1:10,400 if printed on A size (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 400 800 1,600 2,400

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Gully

Short Steep Slope

Other

Political Features

Cities

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

Map Scale: 1:10,400 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 10N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Mateo County, Eastern Part, and San Francisco County, California
Survey Area Data: Version 9, Jul 11, 2011

Soil Survey Area: Santa Clara Area, California, Western Part
Survey Area Data: Version 1, Jul 27, 2010

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Date(s) aerial images were photographed: 6/12/2005; 6/13/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

San Mateo County, Eastern Part, and San Francisco County, California (CA689)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
108	Botella-Urban land complex, 0 to 5 percent slopes	7.9	3.1%
120scl	Aquic Xerorthents, bay mud subtratum, 0 to 2 percent slopes	20.6	8.0%
131	Urban land	0.0	0.0%
155scl	Novato clay, 0 to 1 percent slopes, tidally flooded	121.7	47.3%
169scl	Urbanland-Elder complex, 0 to 2 percent slopes, protected	5.5	2.1%
W	Water	3.0	1.2%
Subtotals for Soil Survey Area		**158.7**	**61.6%**
Totals for Area of Interest		**257.5**	**100.0%**

Santa Clara Area, California, Western Part (CA641)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
120	Aquic Xerorthents, bay mud subtratum, 0 to 2 percent slopes	78.1	30.3%
155	Novato clay, 0 to 1 percent slopes, tidally flooded	1.7	0.7%
165	Urbanland-Campbell complex, 0 to 2 percent slopes, protected	4.3	1.7%
169	Urbanland-Elder complex, 0 to 2 percent slopes, protected	13.1	5.1%
W	Water	1.5	0.6%
Subtotals for Soil Survey Area		**98.8**	**38.4%**
Totals for Area of Interest		**257.5**	**100.0%**

Hydric Soils (CA)

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      i. a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      ii. a water table at a depth of 0.5 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      iii. a water table at a depth of 1.0 foot or less during the growing season if saturated hydraulic conductivity (Ksat) is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. September 18, 2002. Hydric soils of the United States.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Report—Hydric Soils (CA)

Hydric Soils (CA)– CA689 - San Mateo County, Eastern Part, and San Francisco County, California							
Map symbol and map unit name	**Component/ Local Phase**	**Hydric status**	**Landform**	**Hydric criteria met (code)**	**Farmable condition**	**Comp. pct.**	**Altered hydrology notes**
108: Botella-Urban land complex, 0 to 5 percent slopes	(C) - Botella-	No	Stream terraces,flood plains,alluvial fans	—	—	45	—
	(C) - Urban Land-	No	—	—	—	30	—
	(I) - Orthents Cut&fill-	No	—	—	—	0-8	—
	(I) - Unnamed-	No	—	—	—	0-8	—
	(I) - Unnamed-	No	—	—	—	0-8	—
120scl: Aquic Xerorthents, bay mud subtratum, 0 to 2 percent slopes	(C) - Aquic Xerorthents-bay mud substratum	No	Marshes	—	—	95	—
	(I) - Urban Land-	No	Basin floors	—	—	0-5	—
131: Urban land	(C) - Urban Land-	No	—	—	—	85	—
	(I) - Orthents Cut&fill-	No	—	—	—	0-7	—
	(I) - Orthents Reclaimed-	No	—	—	—	0-7	—
155scl: Novato clay, 0 to 1 percent slopes, tidally flooded	(C) - Novato-tidally flooded	Yes	Marshes	2B3,4	Neither wooded nor farmable under natural conditions	95	—
	(I) - Water-	—	Channels	—	—	0-4	—
	(I) - Typic Xerorthents-acid sulphate	No	Marshes	—	—	0-1	—
169scl: Urbanland-Elder complex, 0 to 2 percent slopes, protected	(C) - Urban Land-	No	Alluvial fans	—	—	70	—
	(C) - Elder-protected	No	Streams	—	—	20	—
	(I) - Caninecreek-gravelly substratum, protected	No	Streams	—	—	0-8	—
	(I) - Water-	Yes	Streams	—	Wooded under natural conditions	0-2	—
W: Water	(C) - Water-	No	—	—	—	100	—

Hydric Soils (CA)– CA641 - Santa Clara Area, California, Western Part							
Map symbol and map unit name	**Component/ Local Phase**	**Hydric status**	**Landform**	**Hydric criteria met (code)**	**Farmable condition**	**Comp. pct.**	**Altered hydrology notes**
120: Aquic Xerorthents, bay mud subtratum, 0 to 2 percent slopes	(C) - Aquic Xerorthents-bay mud substratum	No	Marshes	—	—	95	—
	(I) - Urban Land-	No	Basin floors	—	—	0-5	—
155: Novato clay, 0 to 1 percent slopes, tidally flooded	(C) - Novato-tidally flooded	Yes	Marshes	2B3,4	Neither wooded nor farmable under natural conditions	95	—
	(I) - Water-	—	Channels	—	—	0-4	—
	(I) - Typic Xerorthents-acid sulphate	No	Marshes	—	—	0-1	—
165: Urbanland-Campbell complex, 0 to 2 percent slopes, protected	(C) - Urban Land-	No	Alluvial fans	—	—	70	—
	(C) - Campbell-protected	No	Alluvial fans	—	—	20	water tables have been lowered below the soil profile by historic agricultural pumping
	(I) - Newpark-	No	Alluvial fans	—	—	0-5	—
	(I) - Clear Lake-	No	Basin floors	—	—	0-5	—
169: Urbanland-Elder complex, 0 to 2 percent slopes, protected	(C) - Urban Land-	No	Alluvial fans	—	—	70	—
	(C) - Elder-protected	No	Streams	—	—	20	—
	(I) - Caninecreek-gravelly substratum, protected	No	Streams	—	—	0-8	—
	(I) - Water-	Yes	Streams	—	Wooded under natural conditions	0-2	—
W: Water	(C) - Water-	No	—	—	—	100	—

Data Source Information

Soil Survey Area: San Mateo County, Eastern Part, and San Francisco County, California
Survey Area Data: Version 9, Jul 11, 2011

Soil Survey Area: Santa Clara Area, California, Western Part
Survey Area Data: Version 1, Jul 27, 2010

Appendix B

WETS Tables

WETS Table Documentation

WETS Station : REDWOOD CITY, CA7339 Creation Date: 08/29/2002
Latitude: 3729 Longitude: 12214 Elevation: 00030
State FIPS/County(FIPS): 06081 County Name: San Mateo
Start yr. - 1971 End yr. - 2000

Month	Temperature (Degrees F.) avg daily max	avg daily min	avg	Precipitation (Inches) avg	30% chance will have less than	more than	avg # of days w/.1 or more	avg total snow fall
January	58.5	39.8	49.1	4.19	1.88	5.11	6	0.0
February	62.3	42.4	52.3	3.88	1.59	4.72	6	0.0
March	65.2	44.3	54.8	3.30	1.35	4.01	6	0.0
April	70.4	45.7	58.1	1.07	0.41	1.30	3	0.0
May	74.9	49.0	62.0	0.43	0.01	0.48	1	0.0
June	80.2	52.7	66.4	0.10	0.00	0.12	0	0.0
July	82.7	55.0	68.8	0.03	0.00	0.01	0	0.0
August	82.5	55.0	68.8	0.10	0.00	0.03	0	0.0
September	80.5	53.5	67.0	0.22	0.00	0.28	0	0.0
October	74.9	49.3	62.1	1.06	0.36	1.32	1	0.0
November	64.8	43.7	54.2	2.62	0.73	3.12	4	0.0
December	58.6	39.3	49.0	2.80	1.36	3.47	5	0.0
Annual	-----	-----	-----	------	14.27	22.56	--	----
Average	71.3	47.5	59.4	------	------	------	--	----
Total	-----	-----	-----	19.79	------	------	32	0.0

GROWING SEASON DATES

Probability	Temperature: 24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates / Growing Season Length		
50 percent *	----------	> 365 days	1/27 to 12/18
	> 365 days	> 365 days	326 days
70 percent *	----------	> 365 days	1/15 to 12/30
	> 365 days	> 365 days	350 days

---

* Percent chance of the growing season occurring between the Beginning and Ending dates.

total 1948-2002 prcp

Station : CA7339, REDWOOD CITY
------- Unit = inches

yr	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annl
48							0.02	0.00	0.00	0.25	M0.12	4.10	4.49
49	1.20	3.39	4.91	0.00	0.72	0.01	0.09	0.21	0.03	0.07	1.54	2.09	14.26
50	7.44	2.52	1.47	1.05	0.53	0.03	0.00	0.00	0.00	1.66	6.54	5.69	26.93
51	2.92	2.21	1.18	0.89	0.64	0.02	0.00	0.00	0.00	1.03	2.58	9.34	20.81
52	8.57	1.90	4.43	0.80	0.25	0.09	0.03	0.00	0.01	0.14	2.51	10.19	28.92
53	3.12	0.04	1.76	2.11	0.48	0.16	0.00	0.03	0.00	0.24	2.44	0.36	10.74
54	4.33	2.67	3.07	0.98	0.04	0.24	0.00	0.00	0.00	0.02	2.30	4.00	17.65
55	4.58	1.71	0.11	1.55	0.60	0.00	0.00	0.00	0.00	0.00	1.45	14.16	24.16
56	7.85	2.36	0.19	0.94	0.93	0.01	M0.00	0.00	0.22	1.10	0.00	0.35	13.95
57	2.97	4.06	1.42	1.32	2.76	0.00	0.00	0.00	0.72	1.95	0.66	4.12	19.98
58	4.61	8.82	6.52	6.37	0.30	0.20	0.00	0.00	0.10	0.01	0.12	1.06	28.11
59	5.05	4.55	0.14	0.21	0.00	0.00	0.00	0.02	3.07	0.00	0.00	1.65	14.69
60	4.51	4.57	0.89	0.65	0.63	0.00	0.00	0.00	0.00	0.05	3.15	0.99	15.44
61	1.95	0.83	2.70	0.94	0.76	0.03	0.00	0.02	0.36	0.19	3.11	1.77	12.66
62	1.84	7.58	3.29	0.25	0.00	0.00	0.00	0.01	0.01	6.39	0.33	2.82	22.52
63	4.46	3.20	3.63	2.92	0.55	0.00	0.00	0.00	0.29	0.95	3.98	0.26	20.24
64	3.60	0.27	1.67	0.13	0.56	0.75	0.00	0.08	0.00	1.30	3.59	6.63	18.58
65	3.88	1.08	1.96	3.25	0.00	0.00	0.00	0.07	0.01	0.00	4.45	5.17	19.87
66	2.18	1.81	0.24	0.66	0.13	0.09	0.30	0.04	0.10	0.00	4.04	3.56	13.15
67	10.90	0.17	5.44	4.68	0.15	0.52	0.00	0.00	0.00	0.25	1.33	2.86	26.30
68	5.44	1.42	3.43	0.78	0.07	0.00	0.00	0.11	0.00	0.37	1.95	4.75	18.32
69	9.39	8.90	1.42	1.79	0.01	0.04	0.00	0.00	0.01	1.24	0.73	4.11	27.64
70	8.77	2.04	1.43	0.40	0.04	0.06	0.00	0.00	0.00	0.74	6.69	7.42	27.59
71	1.22	0.36	2.73	0.73	0.21	0.00	0.01	0.35	0.12	0.03	0.81	4.36	10.93
72	1.15	1.21	0.09	0.86	0.00	0.08	0.00	0.00	0.47	4.19	6.29	1.80	16.14
73	7.61	6.07	2.09	0.11	0.00	0.00	0.00	0.00	0.03	1.96	7.36	4.83	30.06
74	3.46	1.05	4.64	2.11	0.00	0.13	0.22	0.00	0.00	1.20	0.69	2.59	16.09
75	1.50	4.33	5.72	1.57	0.00	0.11	0.13	0.46	0.00	1.55	0.22	0.22	15.81
76	0.27	1.92	0.84	0.79	0.00	0.03	0.02	0.90	0.52	0.38	1.11	1.23	8.01
77	1.46	0.86	1.97	0.01	1.07	0.00	0.10	0.00	0.85	0.25	2.17	3.49	12.23
78	9.05	4.95	5.01	2.83	0.02	0.00	0.00	0.00	0.36	0.00	1.73	0.52	24.47
79	5.73	4.94	3.53	1.00	0.38	0.00	0.23	0.00	0.00	2.08	1.65	M1.03	20.57
80	4.56	8.08	1.79	1.43	0.10	0.02	0.10	0.00	0.00	0.05	0.07	2.54	18.74
81	7.21	2.50	4.39	0.19	0.06	0.00	0.00	0.00	0.26	2.20	7.23	5.20	29.24
82	7.29	3.41	8.23	3.27	0.00	0.10	0.00	0.02	1.03	2.05	5.94	5.25	36.59
83	8.07	7.36	9.20	3.58	0.37	0.00	0.00	0.00	0.37	0.69	7.09	6.09	42.82
84	0.46	1.66	1.58	0.54	0.00	0.03	0.00	0.20	0.22	1.83	5.67	2.03	14.22
85	0.66	1.97	4.15	0.08	0.45	0.15	0.05	0.01	0.18	0.99	M2.87	2.57	14.13
86	2.98	10.06		0.67	0.45	0.00	0.03	0.00	0.63	0.00	0.04	1.33	16.19
87	2.84	5.01	1.60	0.22	0.03	0.00	0.00	0.00	0.00	1.05	1.60	3.93	16.28
88	3.31	0.58	0.05	1.65	0.24	0.03	0.00	0.00	0.00	0.18	1.87	3.09	11.00
89	1.59	1.37	3.27	0.95	0.05	0.03	0.00	0.00	0.64	1.72	1.42	0.00	11.04
90	2.48	2.68	0.76	0.18	1.61	0.00	0.01	0.00	0.11	0.20	0.09	2.04	10.16
91	0.33	2.94	7.87	0.33	0.15	0.15	0.00	0.17	0.13	1.70	0.40	2.63	16.80
92	1.85	6.34	3.05	0.20	0.00	0.20	0.00	0.05	0.00	1.58	0.09	6.26	19.62
93	9.81	4.78	2.51	0.63	0.44	0.31	0.00	0.00	0.00	0.41	1.40	2.08	22.37

94	1.97	4.90	0.40	0.99	1.52	0.00	0.00	0.00	0.08	0.62	5.30	2.30	18.08
95	8.55	0.13	8.45	1.16	1.53	0.69	0.00	0.00	0.00	0.00	0.00	6.10	26.61
96	6.51	6.26	3.11	1.01	1.06	0.00	0.00	0.00	0.00	0.60	2.29	6.46	27.30
97	7.84	0.08	0.31	0.28	0.37	0.35	0.00	0.81	0.00	0.62	M7.60	2.61	20.87
98	7.48	12.42	2.43	2.05	2.23	0.00	0.00	0.00	0.06	0.70	3.26	0.89	31.52
99		4.33	3.46	1.77	0.03	0.39	0.00	0.06	0.22	0.32	M1.53	0.34	12.45
0			2.36	0.92		0.13	0.00			M2.57	0.77	0.21	6.96
1	2.44	4.48	1.48	0.83	0.00	0.00	0.00		0.19	0.36	4.54	6.50	20.82
2													

Source: U.S. Department of Agriculture, Natural Resources Conservation Service. 2010

Appendix C

Plant Species Observed in the Delineation Study Area

Appendix C. Plant Species Observed in the Delineation Study Area

The * following a scientific name indicates that the species is not native. Wetland indicator status follows Reed (1988); nomenclature follows Reed (1988) and *The Jepson Manual, Second Edition* (Baldwin et al. 2012) and online updates.

Scientific Name	Common Name	Wetland Indicator Status‡
Trees		
*Acacia greggii**	acacia, catclaw	FACU
*Acacia melanoxylon**	Blackwood acacia	not listed
Acer negundo	box elder	FACW
Alnus rhombifolia	white alder	FACW
*Eucalyptus globulus**	blue gum	not listed
Juglans sp.	walnut	not determined
Pinus spp.*	pine-ornamental	UPL
*Populus alba**	white cottonwood	not listed
Quercus agrifolia	coast live oak	not listed
*Salix babylonica**	weeping willow	FACW-
Umbellularia californica	California bay laurel	FAC
Shrubs and Woody Vines		
Baccharis pilularis	coyote brush	not listed
Morella (*Myrica*) *californica*	California wax myrtle	FAC+
Rubus armeniacus [*R. discolor*]*	Himalayan blackberry	FACW*
Rubus ursinus [*R. vitifolius*]	California blackberry	FACW*
Salix lasiolepis	arroyo willow	FACW
Sambucus nigra ssp. *caerulea* (*S.mexicana*)	blue elderberry	FAC
Forbs		
Achillea millefolium	yarrow	FACU
Artemisia californica	California sagebrush	not listed
Artemisia douglasiana	mugwort	FACW
Atriplex prostrata (*A. triangularis*)*	fat hen	not listed
*Brassica nigra**	black mustard	not listed
*Carduus pycnocephalus**	Italian thistle	not listed
*Carpobrotus chilensis**	iceplant; sea fig	not listed
*Centaurea solstitialis**	yellow star-thistle	not listed
Centromadia fitchii	Fitch's spikeweed	not listed
Chenopodium sp.	goosefoot	undetermined
*Cirsium vulgare**	bull thistle	FACU

Scientific Name	Common Name	Wetland Indicator Status‡
*Conium maculatum**	poison hemlock	FACW
Convolvulus arvensis *	field bindweed	not listed
Conyza canadensis	Canada horseweed	FAC
*Cotula coronopifolia**	brass buttons	FACW+
Cressa truxillensis	alkali weed	FACW
Cuscuta salina	dodder	not listed
Delairea [*Senecio*] *mikanioides**	Cape ivy	not listed
Eschscholzia californica	California poppy	not listed
*Foeniculum vulgare**	fennel	FACU
Frankenia salina	alkali heath	FACW+
Geranium sp.*	geranium	undetermined
Grindelia stricta	gumplant	FACW
Helminthotheca (*Picris*) *echioides**	bristly ox-tongue	FAC*
Hemizonia sp.	tarplant	undetermined
*Hirschfeldia incana**	Mediterranean hoary mustard	not listed
Jaumea carnosa	jaumea	OBL
*Lactuca serriola**	prickly lettuce	FAC
*Lepidium latifolium**	perennial pepperweed	FACW
Limonium californicum	sea lavender	OBL
*Lotus corniculatus**	bird's-foot trefoil	FAC
Malva neglecta *	common mallow	not listed
*Medicago polymorpha**	burclover	not listed
Melilotus albus [*M. alba*]*	white sweetclover	FACU+
Mesembryanthemum (*Gasoul*) *nodiflorum**	slender leaf iceplant	FACU
Mimulus aurantiacus	sticky monkeyflower	not listed
Nicotiana sp.*	tobacco plant	undetermined
*Plantago coronopus**	buckhorn plantain	FAC
*Plantago lanceolata**	English plantain	FAC-
*Plantago major**	common plantain	FACW-
Polygonum aviculare ssp. *depressum* [*P. arenastrum*]*	common knotweed	FAC
*Raphanus sativus**	wild radish	not listed
*Ricinus communis**	castor bean	FACU

Scientific Name	Common Name	Wetland Indicator Status‡
*Rumex crispus**	curly dock	FACW-
*Rumex pulcher**	fiddle dock	FAC+
Ruppia maritima	widgeon grass	OBL
Salicornia pacifica (*S. virginica*)	pickleweed; Pacfic swampfire	OBL
Salsola soda *	oppositeleaf Russian thistle	not listed
Scrophularia californica	bee plant	FAC
*Senecio vulgaris**	common groundsel	NI*
*Silybum marianum**	milk thistle	not listed
Sonchus asper ssp. *asper**	prickly sowthistle	FAC
*Sonchus oleraceus**	common sowthistle	NI*
Spergularia macrotheca	beach sand spurrey	FAC+
*Tamarix parviflora**	smallflower tamarisk	FAC
*Trifolium fragiferum**	strawberry clover	NI
*Trifolium hirtum**	rose clover	not listed
*Typha angustifolia**	narrowleaf cattail	OBL
Typha latifolia	broadleaf cattail	OBL
Xanthium strumarium	rough cockle-bur	FAC+
Grasses and Grass-like Plants		
*Arundo donax**	giant reed	FACW
*Avena fatua**	wild oats	not listed
Bolboschoenus [Scirpus] *maritimus*	alkali bulrush	OBL
*Bromus diandrus**	ripgut brome	not listed
Bromus hordeaceus [*B. mollis*]*	soft chess	FACU-
Bromus madritensis ssp. *madritensis**	foxtail chess	not listed
*Cortaderia jubata**	purple pampas grass	not listed
*Cynodon dactylon**	Bermuda grass	FAC
Cyperus eragrostis	tall flatsedge	FACW
Distichlis spicata	saltgrass	FACW
Elymus [*Elytrigia*] sp.*	wheatgrass	undetermined
Elymus trachycaulus [*Agropyron trachycaulum*]	slender wheatgrass	NI*
Elymus [*Leymus*] *triticoides*	creeping wildrye	FAC+
Festuca [*Vulpia*] *bromoides**	brome fescue	FACW
Festuca (*Vulpia*) *myuros**	rattail fescue	FACU*

Scientific Name	Common Name	Wetland Indicator Status‡
Festuca perennis [*Lolium perenne* ssp. *multiflorum*]*	Italian ryegrass	FAC*
Hordeum marinum ssp. *gussoneanum* [*H. hystrix*]*	Mediterranean barley	FAC
Hordeum murinum ssp. *leporinum**	hare barley	NI
*Parapholis incurva**	curved sicklegrass	OBL
Paspalum dilatatum *	dallis grass	FAC
*Phalaris aquatica**	Harding grass	FAC+
*Poa annua**	annual bluegrass	FACW-
*Polypogon interruptus**	ditch rabbitsfoot grass	OBL
*Polypogon maritimus**	Mediterranean rabbitsfoot grass	OBL
*Polypogon monspeliensis**	rabbitsfoot grass	FACW+
Shoenoplectus [*Scirpus*] *acutus*	hardstem bulrush	OBL
Spartina foliosa	cordgrass	OBL
Stipa miliacea var. *miliacea* [*Piptatherum miliaceum*]*	smilograss	not listed

‡ Wetland Indicator Status for Region 0, California:

OBL (obligate)—almost always occurs in wetlands (99% probability of occurrence in wetlands).

FAC (facultative)—equally likely to occur in wetlands or nonwetlands (34–66% probability).

FACU (facultative upland)—usually occurs in nonwetlands but occasionally occurs in wetlands (1–33% probability).

FACW (facultative wetland)—usually occurs in wetlands (67–99% probability).

UPL (obligate upland)—almost never occurs in wetlands (1% probability); in general, species that are not listed on the wetland plant list are assumed to be obligate upland species.

NI (no indicator)—no indicator status assigned because regional status information is lacking; the indicator status assigned to the species in the nearest adjacent region is applied, in this case, Region 9 (Northwest).

Undetermined—cannot be assigned an indicator status because plant could not be identified to species.

A plus (+) modifier indicates more frequently found in wetlands, a minus (-) modifier indicates less frequently found in wetlands; however, although these modifiers are used in Reed (1988), they are not used in the regional supplements to the 1987 Wetlands Delineation Manual. For example, FAC–, FAC, and FAC+ plants are all considered to be FAC. An asterisk (*) was assigned if the indicator status was derived from limited ecological information.

Appendix D

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	1
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Tidal marsh	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	1
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	50	Y	OBL
2. *Distichlis spicata*	30	Y	FACW
3. *Atriplex triangularis*	10	N	FACW
4. *Polypogon monspeliensis*	5	N	FACW
5. *Hordeum murinum* ssp. *leporinum*	5	N	NI
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	5	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-4	10YR4/3	100					cl	A1	
4-8	10YR4/3	100					sicl	A2	
8-20	Gley 1 2.5/10Y	95	7.5YR3/4	5	C	PL	sic	Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☒	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐
Remarks:						

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☒	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 20					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 20	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	2
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Lower side slope of levee	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	20
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Lolium multiflorum*	35	Y	FAC
2. *Avena fatua*	30	Y	UPL
3. *Brassica nigra*	20	Y	NL
4. *Lactuca serriola*	10	N	FAC
5. *Picris echioides*	5	N	FAC
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum: 0	% Cover of Biotic Crust: 0		

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-10	10YR3/2	100					cl	Fill 1	
10-19	5Y3/1	85	10YR3/4	15	C	M	c	Fill 2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:	Redox appears to be contemporary.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:												
Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 19						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 19	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	3
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Tidal marsh	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	0-1
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed? N	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic? N	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Lepidium latifolium*	90	Y	FACW
2. *Salicornia virginica*	10	N	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	5	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-4	10YR4/2	100					sl	A1	
4-13	10YR4/2	90					sl	A2	Stratified
	10YR3/2	10					sl	A3	Stratified
13-21	10YR4/2	75	5YR4/6	25	C	M, PL	sicl	B	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☒	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
X	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 21					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 21	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Rhizospheres in B horizon (13-21).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	4
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Lower side slope of levee	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	25
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Avena fatua*	60	Y	UPL
2. *Raphanus sativus*	15	N	NL
3. *Lactuca serriola*	15	N	FAC
4. *Lepidium latifolium*	10	N	FACW
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	0
% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-11	10YR3/2	100					l	Fill 1	
11-20	10YR3/2	85	7.5YR4/6	15	C	M	cl	Fill 2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	X

Remarks:	Redox appears to be contemporary.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 20					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 20	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	5
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Lower side slope of levee	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	4-5
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Botella-Urban land complex, 0 to 5 percent slopes (108)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Scripus robustus*	30	Y	OBL
2. *Grindelia stricta*	30	Y	FACW
3. *Atriplex triangularis*	15	N	FACW
4. *Salicornia virginica*	10	N	OBL
5. *Spergularia macrotheca*	10	N	FAC
6. *Polypogon monspeliensis*	5	N	FACW
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	5	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-5	10YR3/2	100					cl	A	
5-18	Gley 1 2.5/N	100					clayey muck	Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☒	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	X	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☒	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 18					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 18	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	6
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Stream bank	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	45
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Botella-Urban land complex, 0 to 5 percent slopes (108)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Avena fatua*	85	Y	UPL
2. *Lepidium latifolium*	10	N	FACW
3. *Brassica nigra*	5	N	NL
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-19	10YR4/3	100					fsl	A	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:												
Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 19						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 19	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	7
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	1
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)						
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No	☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)				

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Ruppia maritima*	80	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	20	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks: Pickleweed and rabbitsfoot grass present around edges of depression.

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-3	5YR4/1	65	7.5YR4/4	35	C	M	c	A1	
3-13	10YR4/1	70	7.5YR4/4	30	C	M	c	A2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☒	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 13					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 13	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	8
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee slope	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	90
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
5.			
6.			
7.			
8.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
6.			
7.			
8.			
9.			
10.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
9. *Avena fatua*	35	Y	UPL
10. *Picris echioides*	5	N	FAC
11. *Malva* sp.	5	N	NL
12. *Lolium multiflorum*	5	N	FAC
13.			
14.			
15.			
16.			
	50	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
3.			
4.			
		= Total Cover	

% Bare Ground in Herb Stratum	50	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks: Part of levee slope was burned = bare soil.

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-18	10YR3/1	100					grcl	Fill	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 18						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 18	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	9
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	0-1
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Y Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☒	No	☐				

Remarks: Area disturbed by vehicles/bikes.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Ruppia maritima*	40	Y	OBL
2. *Salicornia virginica*	50	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	90	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum: 10 % Cover of Biotic Crust: 0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-4	10YR4/2	100					cl	Fill	Disturbed
4-18	10YR4/1	80	7.5YR4/4	20	C	M	c	Ab	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☒	**No**	☐
Depth (Inches):						

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☒	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☒	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 18					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 18	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	10
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Fill mound	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	20
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Avena fatua*	60	Y	UPL
2. *Rumex* sp.	20	Y	FACW
3. *Malva* sp.	10	N	NL
4. *Picris echioides*	5	N	FAC
5. *Lactuca serriola*	5	N	FAC
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	5	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is $\leq 3.0^1$
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-19	10YR4/4	100					cl	Fill	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 19					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 19	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	11
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	0-1
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☒	No	☐				

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	50	Y	OBL
2. *Hordeum marinum* ssp. *gussoneanum*	10	N	FAC
3. *Salsola soda*	10	N	NL
4. *Distichlis spicata*	10	N	FACW
5.			
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	20	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Area has been mowed.

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-9	10YR3/2	75	7.5YR4/6	25	C	PL, M	cl	A1	
9-20	10YR4/1	70	7.5YR4/6	30	C	M	sicl	A2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☒	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☒	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☒	Surface Soil Cracks (B6) Some	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 20					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 20	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	12
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Toe of levee	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	10
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Avena fatua*	95	Y	UPL
2. *Distichlis spicata*	5	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-19	10YR3/2	100					cl	Fill	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:												
Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 19						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 19	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	13
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	0-1
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☒	No	☐				

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	45	Y	OBL
2. *Polypogon maritimus*	10	N	OBL
3. *Lolium multiflorum*	20	N	FAC
4. *Salsola soda*	20	N	NL
5. *Atriplex triangularis*	5	N	FACW
6.			
7.			
8.			
	90	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	66	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-8	10YR3/2	93	7.5YR5/6	7	C	PL	cl	A1	
8-17	10YR4/1	85	7.5YR4/4	15	C	M	c	A2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☒	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 17					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 17	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	14
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee slope	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	70
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Avena fatua*	60	Y	UPL
2. *Picris echioides*	20	Y	FAC
3. *Malva* sp.	20	Y	NL
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-11	10YR3/1	100					vgrcl	Fill	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:	Refusal by gravel at 11”.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 11						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 11	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	15
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Salt marsh	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☒	No	☐				

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	90	Y	OBL
2. *Jaumea carnosa*	10	N	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-8	10YR4/1	100					sic	A1	
8-18	10YR4/1	70	7.5YR4/6	30	C	M	sic	A2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☒	**No**	☐
Depth (Inches):						

Remarks:	Dredged spoils deposited approximately in 1970's.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☒	Saturation (A3) *	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	X	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	X	Depth (inches):	None to 18					
Saturation Present? (includes capillary fringe)	Yes	X	No	☐	Depth (inches):	9	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	* Saturation between ped faces only.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	16
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 6, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Fill area in restored tidal marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	2
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Distichlis spicata*	70	Y	FACW
2. *Salicornia virginica*	10	N	OBL
3. *Grindelia stricta*	10	N	FACW
4. *Frankenia salina*	10	N	FACW
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-7	10YR3/2	100					cl	A1	Fill
7-18	10YR4/1	50					sic	A2	variegated
	and 10YR5/4	50							

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☐	**No**	☒
Depth (Inches):						

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 18						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 18	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	17
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Salt marsh	Land Surface Shape (concave, convex, planar):	Concave/planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-15	10YR5/1	80	5YR4/6	20	C	M	sic	A1	
15-16	Gley 1 3/N	100					sic	A2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☒	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	15					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	13	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	18
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Toe of levee	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	10
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Brassica nigra*	60	Y	NL
2. *Frankenia salina*	25	Y	FACW
3. *Salicornia virginica*	10	N	OBL
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-14	10YR4/1	65	10YR4/4	35	C	M	c	Fill	Relic Redox
14-18	10YR4/1	75	7.5YR4/6	25	C	M, PL	sic	Ab	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:	Relictual redox – not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:												
Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 18						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 18	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	19
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Salt marsh	Land Surface Shape (concave, convex, planar):	Concave/planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-8	10YR5/1	75	5YR4/6	25	C	M	sic	A	
8-22	Gley 1 4/N	100					sic	Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☒	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	20 *					
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	4	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: * Not yet stabilized.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	20
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee top	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Mesembryanthemum nodiflorum*	40	Y	NL
2. *Frankenia salina*	40	Y	FACW
3. *Bromus diandrus*	10	N	UPL
4.			
5.			
6.			
7.			
8.			
	90	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-5	10YR4/2	100					cl	Fill 1	
5-21	10YR3/1	85	7.5YR3/2	15	C	M	sic	Fill 2	Relic redox

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 21						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 21	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	21
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Salt marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2. *Distichlis spicata*	5	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	105	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-11	10YR4/1	85	5YR4/6	15	C	M	sic	A	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☒	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☒	No	☐	Depth (inches):	10 *					
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	3	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: * Water table not yet stabilized.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	22
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee slope near toe	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	30
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No** ☒
Hydric Soil Present?	Yes	☐	No	☒				
Wetland Hydrology Present?	Yes	☐	No	☒				

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Brassica nigra*	60	Y	NL
2. *Carduus pycnocephalus*	20	Y	NL
3. *Salicornia virginica*	20	Y	OBL
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum: 0 % Cover of Biotic Crust: 0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-13	10YR3/2	100					c	Fill	
13-19	10YR3/1	95	7.5YR4/6	5	C	PL	c	Ab	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☐	**No**	☒
Depth (Inches):						

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 19						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 19	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	23
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal slope	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	3
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Brassica nigra*	30	Y	NL
2. *Lepidium latifolium*	10	N	FACW
3. *Mesembryanthemum nodiflorum*	10	N	UPL
4. *Frankenia salina*	10	N	FACW
5. *Salicornia virginica*	20	Y	OBL
6. *Hordeum marinum* ssp. *gussoneanum*	5	N	FAC
7. *Bromus madritensis* ssp. *madritensis*	10	N	UPL
8. unknown tarweed	5	N	
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	20	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-10	10YR3/1	100					grcl	Fill 1	
10-12	10YR3/2	95	10YR3/4	5	C	M	grcl	Fill 2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:	Refusal at 12” by gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 12						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 12	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	24
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Concave	Slope (%):	1
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	65	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	65	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	35	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-17	10YR4/1	65	5YR4/6	35	C	M	sic	A	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☒	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 17					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 17	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	25
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	2-5
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-5	10YR3/1	100					vgrl	Fill	
5-12	10YR3/2	85	7.5YR4/6	15	C	PL	c	Ab	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☒	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☒	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 12					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 12	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	26
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	2
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-11	10YR4/3	100					grcl	Fill	
11-13	10YR2/1	100					c	Ab	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:	Refusal at 13”.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:												
Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 13						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 13	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	27
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	0183
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	0-2

Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)					NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐ (If no, explain in Remarks.)

Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No	☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)				

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	60	Y	OBL
2. *Parapholis strigosa* (?)	20	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	20	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-3	10YR4/2	90	7.5YR4/6	10	C	M, PL	sic	A1	
3-20	10YR4/1	80	7.5YR4/6	20	C	M	sic	A2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☒	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☒	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 20					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 20	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	28
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Filled tidal marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	3
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Melilotus alba*	30	Y	UPL
2. *Bromus diandrus*	30	Y	UPL
3. *Salicornia virginica*	20	Y	OBL
4. *Hordeum marinum* ssp. *gussoneanum*	10	N	FAC
5. *Carduus pycnocephalus*	10	N	NL
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	33	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-2	10YR3/1	100					l	Fill 1	
2-9	10YR3/2	85	7.5YR3/4	15	C	M	cl	Fill 2	
9-21	10YR3/1	70	7.5YR4/6	30	C	M	c	Ab	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☒	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**Q**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 21						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 21	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	29
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Salt marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-5	10YR3/2	80	7.5YR4/4	20	C	M	sic	A	
5-19	10YR4/1						sic	Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☒	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☒	**No**	☐
Depth (Inches):						

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☒	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☒	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☒	No	☐	Depth (inches):	10 *	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	3					

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: * Not yet stabilized.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	30
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Side slope levee	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	15
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Frankenia salina*	60	Y	FACW
2. *Salicornia virginica*	20	Y	OBL
3. *Bromus diandrus*	10	N	UPL
4. *Lolium multiflorum* [*L. perenne*]	5	N	FAC
5. *Brassica nigra*	5	N	NL
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is $\leq 3.0^1$
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-15	10YR3/2	100					c	Fill	
15-21	10YR3/1	90	7.5YR4/6	10	C	PL	c	Ab	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☐	**No**	☒
Depth (Inches):						

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 21						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 21	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	31
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Salt marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks: SM-8

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 31

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-7	10YR4/1	80	5YR4/4	20	C	M	sic	A	
7-14	10YR4/1	100						Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☒	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☒	No	☐	Depth (inches):	10					
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	6”	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water in pit not yet stabilized.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	32
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 7, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee side slope	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	40
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Novato clay, 0 to 1 percent slopes (117)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Frankenia salina*	50	Y	FACW
2. *Bromus diandrus*	10	N	UPL
3. *Mesembryanthemum nodiflorum*	20	Y	NL
4. *Vulpia myuros*	10	N	FACU
5. *Brassica nigra*	10	N	NL
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 32

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-11	10YR5/2	100					sic	Fill 1	
11-18	10YR4/2	90	7.5YR4/4	10	C	M	c	Fill 2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒

Remarks:	Redox apparently formed in dredged source material; not diagnostic.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 18					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 18	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	33
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Planar/Concave	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	20	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 33

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-9	10YR4/2	70	5YR4/6	30	C	M	sic	A	
9-14	Gley 1 2.5/N	100					c	Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☒	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☒	No	☐	Depth (inches):	14 *					
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	12	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: * Water level not yet stabilized.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	34
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee slope –near toe	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	40
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Bromus diandrus*	60	Y	NI
2. *Carduus pycnocephalus*	20	Y	NL
3. *Salsola soda*	20	Y	NL
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 34

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-8	10YR3/2	100					cl	Fill	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 8						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 8	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	35
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Planar/Concave	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	10

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-12	10YR4/1	60	2.5YR4/8	25	C	M, PL	sic	A	
			5YR4/6	15	C	M, PL			
12-17	10YR4/1	100					c	Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☒	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☒	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:											
Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 17					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 17	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	36
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee slope near toe	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	40
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No** ☒
Hydric Soil Present?	Yes	☐	No	☒				
Wetland Hydrology Present?	Yes	☐	No	☒				

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Bromus diandrus*	50	Y	NI
2. *Frankenia salina*	20	Y	FACW
3. *Carduus pycnocephalus*	10	N	NL
4. *Distichlis spicata*	10	N	FACW
5.			
6.			
7.			
8.			
	90	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☐ **No** ☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 36

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-9	10YR3/2	100					sl	Fill 1	
9-21	10YR4/2	85	7.5YR4/6	15	C	M	sl & sic	Fill 2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☐	**No**	☒
Depth (Inches):						

Remarks:	Redox too deep to meet criteria for indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 21
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 21

Wetland Hydrology Present?	**Yes**	☐	**No**	☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	37
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Salt marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	100	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤ 3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 37

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-7	10YR3/2	75	5YR4/6	25	C	M	sic	A	
7-15	10YR4/1	100					sic	Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☒	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☒	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☒	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☒	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☒	No	☐	Depth (inches):	11					
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	8	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water in pit not yet stabilized.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	38
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee slope near toe	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	50
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Bromus diandrus*	20	Y	UPL
2. *Carduus pycnocephalus*	15	Y	NL
3. *Lolium multiflorum* [*L. perenne*]	10	N	FAC
4. *Frankenia salina*	10	N	FACW
5. *Lactuca serriola*	5	N	FAC
6. *Hordeum murinum* ssp. *leporinum*	5	N	NI
7.			
8.			
	65	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	35	% Cover of Biotic Crust	0

Dominance Test Worksheet:		
Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index Worksheet:			
Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)
Prevalence Index = B/A =			

Hydrophytic Vegetation Indicators:	
	Dominance Test is >50%
	Prevalence Index is $\leq 3.0^1$
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 38

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-14	10YR4/2	100					cl	Fill	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):							
Type:							
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 14						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 14	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	39
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Bench	Land Surface Shape (concave, convex, planar):	Planar/Concave	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No** ☒
Hydric Soil Present?	Yes	☐	No	☒				
Wetland Hydrology Present?	Yes	☐	No	☒				

Remarks: Data point located in trough-like area, which is the lowest point along bench on east side of creek. Trough is approximately one-foot lower than remainder of bench-like area. Drift line is inboard of bench at outer edge of Spartina. Bank is vertical and higher than opposite bank.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia virginica*	90	Y	OBL
2. *Frankenia salina*	10	N	FACW
3. *Elytrigia* sp.	10	N	NL
4.			
5.			
6.			
7.			
8.			
	110	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 39

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-13	10YR3/1	100					cl	A	
13-22	10YR4/1	75	10YR4/6	25	C	M	c	B	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒

Remarks:	Redox is too deep to be diagnostic.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 22						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 22	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	40
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Salt marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks: Below MHW.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Spartina foliosa*	80	Y	OBL
2. *Salicornia virginica*	20	Y	OBL
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-16	10YR4/1	85	5YR4/6	15	C	M	sl	A	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☒	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☒	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 16					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 16	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	41
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Diked tidal marsh	Land Surface Shape (concave, convex, planar):	Planar	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No**	☐
Hydric Soil Present?	Yes	☒	No	☐					
Wetland Hydrology Present?	Yes	☒	No	☐					

Remarks: Adjacent to turf area.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Hordeum marinum* ssp. *gussoneanum*	50	Y	FAC
2. *Salicornia virginica*	30	Y	OBL
3. *Lolium multiflorum* [*L. perenne*]	10	N	FAC
4. *Polypogon monspeliensis*	10	N	FACW
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	10	% Cover of Biotic Crust	30

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 41

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-6	10YR4/1	85	7.5YR4/6	15	C	PL, M	sicl	A	
6-14	10YR4/3	100					cl	B	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☒	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☒	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☒	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 14					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 14	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	42
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	July 8, 2010
Investigator(s):	Butterworth, Valerius	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	Levee slope	Land Surface Shape (concave, convex, planar):	Slope	Slope (%):	40
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	(no mapping data available)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year?	Yes	☒	No	☐	(If no, explain in Remarks.)					
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☐	No	☒	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks:

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus* sp.	20	Y	NL
2.			
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Avena fatua*	90	Y	UPL
2. *Distichlis spicata*	10	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☐	**No**	☒

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 42

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-11	10YR3/2	100					grcl	Fill	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☐	**No**	☒
Depth (Inches):						

Remarks:	Refusal at 13”.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 11						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 11	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	43
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	February 22, 2012
Investigator(s):	Butterworth, Brimacombe	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	filled tidal marsh	Land Surface Shape (concave, convex, planar):	convex	Slope (%):	5
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Aquic Xerofluvents, bay mud substratum, 0 to 2 percent slopes (120)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☒	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No**	☒
Hydric Soil Present?	Yes	☐	No	☒					
Wetland Hydrology Present?	Yes	☐	No	☒					

Remarks: At 35% of average annual precipitation to date.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Cynodon dactylon*	95	Y	FAC
2. *Rumex crispus*	5	N	FACW
3. Unknown turf grass	2	N	undet.
4.			
5.			
6.			
7.			
8.			
	102	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50% **see remarks**
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks: Sampling point taken on irrigated fairway of golf course; supplemental water may influence vegetation that grows in the area

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 43

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-9	10YR3/2	100					l	Fill 1	
9-21	10YR3/2	100					cl	Fill 2	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☐	**No**	☒
Depth (Inches):						

Remarks:	Soil consists of fill material

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 21						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 21	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	44
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	February 22, 2012
Investigator(s):	Butterworth, Brimacombe	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	depression in filled tidal marsh	Land Surface Shape (concave, convex, planar):	concave	Slope (%):	0
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Aquic Xerofluvents, bay mud substratum, 0 to 2 percent slopes (120)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☒	No	☐				

Remarks: At 35% of average annual precipitation to date.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Typha latifolia*	80	Y	OBL
2. *Cyperus eragrostis*	5	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
	85	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	15	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 44

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-5	5Y 2.5/1	100					I	A	
5-11	Gley 1 3/10Y	100					I	Bg	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☒	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☒	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☒	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☒	No	☐	Depth (inches):	at 5”					
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	at 4”	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	45
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	February 22, 2012
Investigator(s):	Butterworth, Brimacombe	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	tidal marsh	Land Surface Shape (concave, convex, planar):	concave	Slope (%):	2
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Aquic Xerofluvents, bay mud substratum, 0 to 2 percent slopes (120)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☒	No	☐				

Remarks: At 35% of average annual precipitation to date.

Diked marsh; 2 ponded areas within wetland. 4-inch drainpipe at each end.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia pacifica*	75	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	75	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	25	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 45

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-6	10YR4/2	100					grl	Fill 1	
6-8	7.5YR 3/2	100					grcl	Fill 2	
8+									Refusal by high gravel content

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☒	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:	Fill material with low organic matter content and recent deposition appear to prevent formation of redox features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☒	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 8”					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 8”	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	46
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	February 22, 2012
Investigator(s):	Butterworth, Brimacombe	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	filled tidal marsh	Land Surface Shape (concave, convex, planar):	planar	Slope (%):	25
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Aquic Xerofluvents, bay mud substratum, 0 to 2 percent slopes (120)	NWI classification:	

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)

Are Vegetation	☒,	Soil	☐,	Or Hydrology	☐,	significantly disturbed?	Are "Normal Circumstances" present?	Yes	☒	No ☐
Are Vegetation	☐,	Soil	☐,	Or Hydrology	☐,	naturally problematic?	(If needed, explain any answers in Remarks.)			

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No** ☒
Hydric Soil Present?	Yes	☐	No	☒				
Wetland Hydrology Present?	Yes	☐	No	☒				

Remarks: At 35% of average annual precipitation to date.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. Unknown turf grass	80	Y	-
2. *Plantago coronopus*	5	N	FAC
3. *Salicornia pacifica*	5	N	OBL
4. *Frankenia salina*	5	N	FACW
5. *Helminthotheca* (*Picris*) *echiodes*	2	N	FAC
6. *Cirsium vulgare*	2	N	FACU
7. *Geranium* sp.	2	N	not listed
8.			
	101	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:		(A)
Total Number of Dominant Species Across All Strata:		(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:		(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
X	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ **No** ☐

Remarks: Grass recently mown, making accurate identification of species difficult. Sampling point is on irrigated golf course. Grass species in nearby areas include *Cynodon dactylon* (FAC) and *Poa annua* (FACW).

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 46

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-7	10YR 3/2	100					grl	Fill 1	
7-13	10YR 3/2	100					grc	Fill 2	
13-14	7.5YR 3/2	100					grc	Fill 3	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:		**Hydric Soils Present?**	**Yes**	☐	**No**	☒
Depth (Inches):						

Remarks:	Fill material

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a						
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 14						
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 14	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	47
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	February 22, 2012
Investigator(s):	Butterworth, Brimacombe	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	filled tidal marsh	Land Surface Shape (concave, convex, planar):	convex	Slope (%):	5
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Aquic Xerofluvents, bay mud substratum, 0 to 2 percent slopes (120)	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes ☐	No ☒	(If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed?	Are "Normal Circumstances" present?	Yes ☒	No ☐
Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic?	(If needed, explain any answers in Remarks.)		

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No** ☒
Hydric Soil Present?	Yes	☐	No	☒				
Wetland Hydrology Present?	Yes	☐	No	☒				

Remarks: At 35% of average annual precipitation to date.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Frankenia salina*	50	Y	FACW
2. *Hordeum murinum* ssp. *leporinum*	30	Y	NI
3. *Distichlis spicata*	20	Y	FAC
4. *Brassica nigra*	5	N	not listed
5. *Cirsium vulgare*	5	N	FACU
6. *Poa annua*	2	N	FACW
7. *Festuca* (*Vulpia*) *myuros*	2	N	FACU
8.			
	114	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	67	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks: sampling point is on irrigated golf course

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 47

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-4	7.5YR 3/1	30					l	Fill 1	
	and 2.5Y 3/2	70					cl	Fill 1	
4-17	10YR 3/2	100					cl	Fill 2	
17-23	10YR 4/1	80	5YR3/4	20	C	M	l	Fill 3	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☐	**No**	☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 23					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 23	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	48
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	February 22, 2012
Investigator(s):	Butterworth, Brimacombe	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	channel in filled tidal marsh	Land Surface Shape (concave, convex, planar):	convex	Slope (%):	1
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Aquic Xerofluvents, bay mud substratum, 0 to 2 percent slopes (120)	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes ☐	No ☒	(If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed?	Are "Normal Circumstances" present?	Yes ☒	No ☐
Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic?	(If needed, explain any answers in Remarks.)		

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☒	**No** ☐
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☒	No	☐				

Remarks: At 35% of average annual precipitation to date.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Salicornia pacifica*	60	Y	OBL
2. *Distichlis spicata*	35	Y	FACW
3. *Frankenia salina*	10	N	FACW
4.			
5.			
6.			
7.			
8.			
	105	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	5	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	67	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is $\leq 3.0^1$
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 48

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-10	10YR 3/2	85	7.5YR4/6	15	C	M	sicl	A	native soil
10-14	10YR 3/2	100					sicl	Bw	native soil

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☐	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☒	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		
☐	Sandy Gleyed Matrix (S4)				

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**No**	☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☒	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☒	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☒	No	☐	Depth (inches):	at 3”					
Saturation Present? (includes capillary fringe)	Yes	☒	No	☐	Depth (inches):	at 2”	**Wetland Hydrology Present?**	**Yes**	☒	**No**	☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site:	San Francisquito Creek Flood Protection Project	City/County:	East Palo Alto/San Mateo	Sampling Point:	49
Applicant/Owner:	San Francisquito Creek Joint Powers Authority	State:	CA	Sampling Date:	February 22, 2012
Investigator(s):	Butterworth, Brimacombe	Section, Township, Range:		Photo No:	
Landform (hillslope, terrace, etc.):	depression in tidal marsh	Land Surface Shape (concave, convex, planar):	convex	Slope (%):	1
Subregion (LRR):	C	Lat:		Long:		Datum:	
Soil Map Unit Name:	Aquic Xerofluvents, bay mud substratum, 0 to 2 percent slopes (120)	NWI classification:	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes ☐	No ☒	(If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, Or Hydrology ☐, significantly disturbed?	Are "Normal Circumstances" present?	Yes ☒	No ☐
Are Vegetation ☐, Soil ☐, Or Hydrology ☐, naturally problematic?	(If needed, explain any answers in Remarks.)		

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	**Is the Sampling Area within a Wetland?**	**Yes**	☐	**No** ☒
Hydric Soil Present?	Yes	☒	No	☐				
Wetland Hydrology Present?	Yes	☐	No	☒				

Remarks: At 35% of average annual precipitation to date.

VEGETATION

Tree Stratum (Plot size r = 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
		= Total Cover	
Sapling/Shrub Stratum (Plot size r = 5 ft.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size r = 5 ft.)			
1. *Distichlis spicata*	80	Y	FACW
2. *Spergularia macrotheca*	10	N	FAC
3. *Salicornia pacifica*	5	N	OBL
4. *Rumex pulcher*	5	N	FAC
5.			
6.			
7.			
8.			
	100	= Total Cover	
Woody Vine Stratum (Plot size r = 30 ft.)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum	0	% Cover of Biotic Crust	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X	Dominance Test is >50%
	Prevalence Index is ≤3.0[1]
	Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?	**Yes**	☒	**No**	☐

Remarks:

Project Site:	San Francisquito Creek Flood Protection Project

SOIL

Sampling Point: 49

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (Moist)	%	Type[1]	Loc[2]	Texture	Horizon	Remarks
0-8	10YR 3/2	100					sic	A	
8-22	10YR 3/2	75	7.5YR3/4	25	C	M	c	Bw	

[1]Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, LRC=Living Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				**Indicators for Problematic Hydric Soils[3]:**	
☐	Histosol (A1)	☐	Sandy Redox (S5)	☐	1 cm Muck (A9) **(LRR C)**
☐	Histic Epipedon (A2)	☐	Stripped Matrix (S6)	☐	2 cm Muck (A10) **(LRR B)**
☐	Black Histic (A3)	☐	Loamy Mucky Mineral (F1)	☐	Reduced Vertic (F18)
☐	Hydrogen Sulfide (A4)	☐	Loamy Gleyed Matrix (F2)	☐	Red Parent Material (TF2)
☐	Stratified Layers (A5) **(LRR C)**	☒	Depleted Matrix (F3)	☐	Other (Explain in Remarks)
☐	1 cm Muck (A9) **(LRR D)**	☐	Redox Dark Surface (F6)		
☐	Depleted Below Dark Surface (A11)	☐	Depleted Dark Surface (F7)		
☐	Thick Dark Surface (A12)	☐	Redox Depressions (F8)		
☐	Sandy Mucky Mineral (S1)	☐	Vernal Pools (F9)		[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.
☐	Sandy Gleyed Matrix (S4)				

Restrictive Layer (if present):						
Type:						
Depth (Inches):		**Hydric Soils Present?**	**Yes**	☒	**Q**	☐

Remarks:	Appears to be mostly native soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)				Secondary Indicators (2 or more required)	
☐	Surface Water (A1)	☐	Salt Crust (B11)	☐	Water Marks (B1) **(Riverine)**
☐	High Water Table (A2)	☐	Biotic Crust (B12)	☐	Sediment Deposits (B2) **(Riverine)**
☐	Saturation (A3)	☐	Aquatic Invertebrates (B13)	☐	Drift Deposits (B3) **(Riverine)**
☐	Water Marks (B1) **(Nonriverine)**	☐	Hydrogen Sulfide Odor (C1)	☐	Drainage Patterns (B10)
☐	Sediment Deposits (B2) **(Nonriverine)**	☐	Oxidized Rhizospheres along Living Roots (C3)	☐	Dry-Season Water Table (C2)
☐	Drift Deposits (B3) **(Nonriverine)**	☐	Presence of Reduced Iron (C4)	☐	Crayfish Burrows (C8)
☐	Surface Soil Cracks (B6)	☐	Recent Iron Reduction in Tilled Soils (C6)	☐	Saturation Visible on Aerial Imagery (C9)
☐	Inundation Visible on Aerial Imagery (B7)	☐	Thin Muck Surface (C7)	☐	Shallow Aquitard (D3)
☐	Water-Stained Leaves (B9)	☐	Other (Explain in Remarks)	☐	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	☐	No	☒	Depth (inches):	n/a					
Water Table Present?	Yes	☐	No	☒	Depth (inches):	None to 22					
Saturation Present? (includes capillary fringe)	Yes	☐	No	☒	Depth (inches):	None to 22	**Wetland Hydrology Present?**	**Yes**	☐	**No**	☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	

Appendix E

Representative Photographs

Appendix E

Representative Photographs

Photo 1 – Tidal channel (San Francisquito Creek). Facing downstream (northeast) from footbridge. Tidal salt marsh on right bank.

Photo 2 – Tidal salt marsh. Facing northeast at Data Point 19, with toe of levee in foreground.

Photo 3 – Tidal channel with adjoining tidal salt marsh. Facing north at Data Point 19.

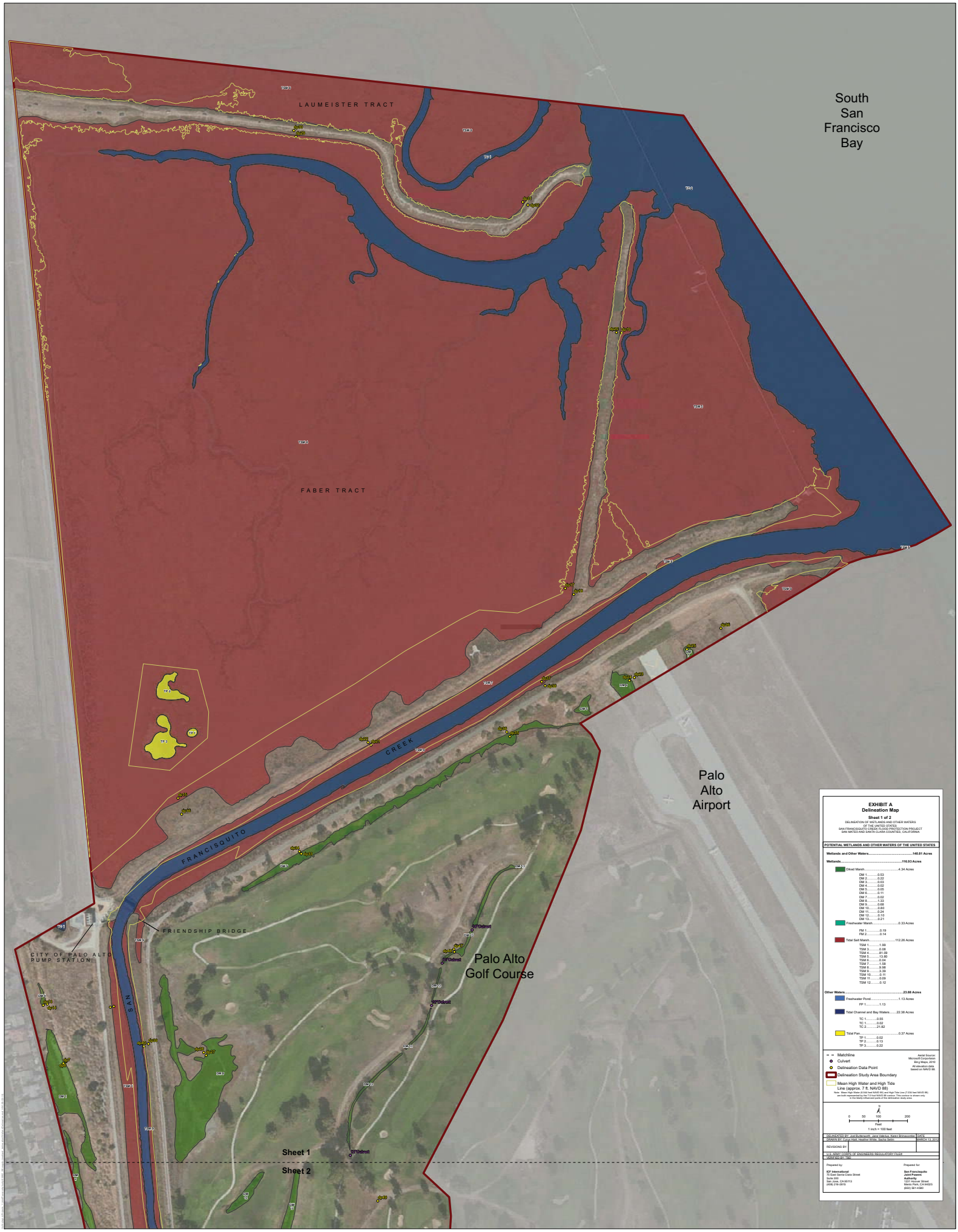
Photo 4 – Diked marsh. Facing north along western edge of golf course, south of Data Points 39 and 40.

Photo 5 – Tidal pan. Facing north, in Faber Tract.

Photo 6 – Diked marsh. Facing west, in golf course.

Exhibit A

Delineation Maps


LAUMEISTER TRACT
FABER TRACT
South San Francisco Bay
Palo Alto Airport
Palo Alto Golf Course
FRANCISQUITO CREEK
SAN
FRIENDSHIP BRIDGE
CITY OF PALO ALTO PUMP STATION
Sheet 1
Sheet 2
EXHIBIT A
Delineation Map
Sheet 1 of 2
DELINEATION OF WETLANDS AND OTHER WATERS
OF THE UNITED STATES
SAN FRANCISQUITO CREEK FLOOD PROTECTION PROJECT
SAN MATEO AND SANTA CLARA COUNTIES, CALIFORNIA
POTENTIAL WETLANDS AND OTHER WATERS OF THE UNITED STATES
Wetlands and Other Waters.....140.01 Acres
Wetlands.....116.93 Acres
Diked Marsh.....4.34 Acres
DM 1.....0.53
DM 2.....0.22
DM 3.....0.03
DM 4.....0.02
DM 5.....0.05
DM 6.....0.11
DM 7.....0.02
DM 8.....1.33
DM 9.....0.02
DM 10.....0.80
DM 11.....0.24
DM 12.....0.10
DM 13.....0.21
Freshwater Marsh.....0.33 Acres
FM 1.....0.19
FM 2.....0.14
Tidal Salt Marsh.....112.26 Acres
TSM 1.....1.99
TSM 3.....0.08
TSM 4.....81.09
TSM 5.....13.80
TSM 6.....0.54
TSM 7.....0.08
TSM 8.....3.98
TSM 9.....3.39
TSM 10.....0.11
TSM 11.....0.09
TSM 12.....0.12
Other Waters.....23.88 Acres
Freshwater Pond.....1.13 Acres
FP 1.....1.13
Tidal Channel and Bay Waters.....22.38 Acres
TC 1.....0.55
TC 1.....0.02
TC 2.....21.82
Tidal Pan.....0.37 Acres
TP 1.....0.02
TP 2.....0.13
TP 3.....0.22
Matchline
Culvert
Delineation Data Point
Delineation Study Area Boundary
Mean High Water and High Tide Line (approx. 7 ft. NAVD 88)
Aerial Source: Microsoft Corporation Bing Maps, 2010
All elevation data based on NAVD 88.
Feet
1 inch = 100 feet
ARCHITECTED BY: Joel Hultquist, Jane Valkus, Sasha Bogaevsky
DRAWN BY: Cyrus Hatt, Heather Wilde, Sacha Stein
DATE: MARCH 13, 2012
REVISIONS BY:
U.S. ARMY CORPS OF ENGINEERS REGULATORY FILE #
VERIFIED BY: TBD
Prepared by:
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Prepared for:
San Francisquito Joint Powers Authority
1231 Hoover Street
Menlo Park, CA 94025
(650) 561-4380

EXHIBIT A
Delineation Map

Sheet 2 of 2

DELINEATION OF WETLANDS AND OTHER WATERS
OF THE UNITED STATES
SAN FRANCISQUITO CREEK FLOOD PROTECTION PROJECT
SAN MATEO AND SANTA CLARA COUNTIES, CALIFORNIA

POTENTIAL WETLANDS AND OTHER WATERS OF THE UNITED STATES

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TP 3.....0.22

Matchline
Culvert
Delineation Data Point
Delineation Study Area Boundary
Mean High Water and High Tide Line (approx. 7 ft. NAVD 88)

Note: Mean High Water (6.52 feet NAVD 88) and High Tide Line (7.030 feet NAVD 88) are both represented by the 7.0 feet NAVD 88 contour. This contour is shown only in the Shelly Drainage ditch of the alternative study area.

Aerial Source: Microsoft Corporation Bing Maps, 2010
All elevation data based on NAVD 88.

N
0 50 100 200
Feet
1 inch = 100 feet

ARCHITECTED BY: Joel Buchanan, Jane Valerius, Kaela Bonaventre	DATE
DRAWN BY: Cyrus Hall, Heather Wilde, Sacha Stein	MARCH 13, 2012
REVISIONS BY:	
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